

Application No. 08/499,423

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (previously amended) An article comprising a porous polytetrafluoroethylene tube provided with a covering of one or more layers of porous polytetrafluoroethylene film, said tube having a circumference wherein the circumference of said porous polytetrafluoroethylene tube increases in response to the application of internal pressure up to a second circumference that is at least 100% larger than said first-circumference prior to the application of the internal pressure, thereafter the second circumference remains substantially unchanged with further increasing internal pressure if used within a designed range of operating pressures.

Claim 2. (cancelled)

Claim 3. (previously amended) The article of claim 1 having a wall thickness less than or equal to about 0.25 mm.

Claim 4. (previously amended) The article of claim 3 having a wall thickness less than or equal to about 0.10 mm.

Claim 5. (previously amended) The article of claim 1 wherein said porous polytetrafluoroethylene tube has a microstructure of nodes interconnected by fibrils.

Claim 6. (previously amended) The article of claim 5 wherein said one or more layers of porous polytetrafluoroethylene film are helical layers.

Claim 7. (previously amended) The article of claim 6 in which said helical layers are in the form of a tube.

Claim 8. (cancelled)

Claim 9. (previously amended) The article of claim 6 in which said porous polytetrafluoroethylene film is thermally bonded to the porous polytetrafluoroethylene tube.

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Claim 10. (previously amended) The article of claim 6 in which the tube exhibits minimal recoil following removal of a circumferentially distending force.

Claim 11. (previously amended) The article of claim 10 exhibiting minimal recoil of 14 percent or less.

Claim 12. (previously amended) The article of claim 11 exhibiting minimal recoil of 10 percent or less.

Claim 13. (previously amended) The article of claim 12 exhibiting minimal recoil of 7 percent or less.

Claim 14. (previously amended) The article of claim 6 adapted for use as a vascular graft.

Claim 15. (previously amended) The article of claim 14 having a wall thickness less than or equal to about 0.25 mm.

Claim 16. (previously amended) The article of claim 15 having a wall thickness less than or equal to about 0.10 mm.

Claim 17. (previously amended) The article of claim 14 having first and second opposing ends wherein the second circumference at the first opposing end is larger than the second circumference at the second opposing end whereby the tube is tapered between the first and second opposing ends.

Claim 18. (previously amended) The article of claim 14 wherein the tube is branched and has at least three ends.

Claim 19. (previously amended) The article of claim 14 adapted for use as an intraluminal graft.

Claim 20. (previously amended) The article of claim 19 wherein the intraluminal graft is secured to a blood conduit by sutures.

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Claim 21. (previously amended) The article of claim 19 wherein the intraluminal graft is secured to a blood conduit by a stent.

Claim 22. (previously amended) The article of claim 19 wherein the circumference is increased by inflating a balloon.

Claim 23. (previously amended) The article of claim 19 wherein the circumference is increased by blood pressure.

Claim 24 (previously amended) The article of claim 1 adapted for use as a vascular graft.

Claim 25 (previously amended) The article of claim 24 adapted for use as an intraluminal graft.

Claim 26. (previously amended) The article of claim 1 wherein the tube exhibits minimal recoil following a substantial reduction in pressure.

Claim 27. (previously amended) The article of claim 1 wherein the film-covered tube comprises an interior liner adapted for use within a separate tubular form selected from the group consisting of tubes, pipes and blood conduits.

Claim 28. (previously amended) The article of claim 27 wherein the blood conduits are prosthetic vascular grafts.

Claim 29. (previously amended) The article of claim 27 wherein the blood conduits are living blood vessels.

Claim 30. (previously amended) The article of claim 27 wherein the interior liner covers an anastomosis.

Claim 31. (previously amended) The article of claim 1 having first and second opposing ends wherein the second circumference at the first opposing end is larger than the second circumference at the second opposing end whereby the tube is tapered between the first and second opposing ends.

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Claim 32. (previously amended) The article of claim 1 wherein the tube is branched and has three ends.

Claim 33. (previously amended) An article comprising a porous polytetrafluoroethylene tube provided with a covering of one or more layers of porous polytetrafluoroethylene film, said film-covered tube having a first circumference at a first internal pressure of atmospheric pressure, a second circumference at a second internal pressure of greater than atmospheric pressure, said second circumference being at least 100% greater than the first circumference, wherein upon applying an internal pressure greater than the second internal pressure but within a designed range of operating pressures, the second circumference remains substantially unchanged.

Claim 34. (cancelled)

Claim 35. (previously amended) The article of claim 33 wherein said tube is adapted for use as a vascular graft.

Claims 36-41 (cancelled)

Claim 42. (previously amended) An article comprising a porous polytetrafluoroethylene tube provided with a covering of one or more layers of porous polytetrafluoroethylene film, said film-covered tube having a circumference wherein the circumference of said porous polytetrafluoroethylene film-covered tube increases in response to the application of a circumferentially distending force, wherein the porous polytetrafluoroethylene film-covered tube itself limits recoil to 14 percent or less following removal of the circumferentially distending force.

Claim 43. (previously amended) An article according to claim 42 wherein the recoil is 10 percent or less.

Claim 44. (previously amended) An article according to claim 43 wherein the recoil is 7 percent or less.

Claim 45. (cancelled)

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Claim 46. (previously amended) An article according to claim 42 wherein the tube comprises a vascular graft.

Claim 47. (previously amended) An article according to claim 46 wherein the application of the circumferentially distending force is the result of inflation of a balloon catheter.

Claim 48. (previously amended) An article according to claim 46 wherein the application of the circumferentially distending force is from the application of blood pressure.

Claim 49. (previously amended) An article according to claim 46 wherein the vascular graft has a wall thickness less than about 0.25 mm.

Claim 50. (previously amended) An article according to claim 46 wherein the vascular graft is secured by the use of sutures.

Claim 51. (previously amended) An article according to claim 46 wherein the vascular graft is secured by a stent.

Claim 52. (previously amended) An article according to claim 46 wherein the circumference of said vascular graft increases in response to the application of internal pressure up to a second circumference, thereafter the circumference remaining substantially unchanged with increasing internal pressure.

Claim 53. (previously amended) An article according to claim 52 wherein the application of internal pressure is the result of inflation of a balloon catheter.

Claim 54. (previously amended) An article according to claim 52 wherein the application of internal pressure is from the application of blood pressure.

Claim 55. (previously amended) An article according to claim 52 wherein the vascular graft has a wall thickness less than about 0.25 mm.

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Claim 56. (previously amended) An article according to claim 52 wherein the vascular graft is secured by the use of at least one suture.

Claim 57. (previously amended) An article according to claim 52 wherein the vascular graft is secured by a stent.

Claim 58. (previously amended) An article according to claim 42 wherein the tube is adapted for use as an Intraluminal graft.

Claim 59. (previously amended) An article according to claim 58 wherein the application of internal pressure is the result of inflation of a balloon catheter.

Claim 60. (previously amended) An article according to claim 58 wherein the application of internal pressure is from the application of blood pressure.

Claim 61. (previously amended) An article according to claim 58 wherein the intraluminal graft has a wall thickness less than about 0.25 mm.

Claim 62. (previously amended) An article according to claim 58 wherein the intraluminal graft is secured by the use of at least one suture.

Claim 63. (previously amended) An article according to claim 58 wherein the intraluminal graft is secured by a stent.

Claim 64. (previously amended) An article according to claim 58 wherein the circumference of said intraluminal graft increases in response to the application of the circumferentially distending force up to a second circumference that is at least 100% larger than the circumference prior to the application of the circumferentially distending force, thereafter the second circumference remaining substantially unchanged with further increasing circumferentially distending force within a designed range of operating pressures.

Claim 65. (previously amended) An article according to claim 64 wherein the application of the circumferentially distending force is the result of inflation of a balloon catheter.

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Claim 66. (previously amended) An article according to claim 64 wherein the application of the circumferentially distending force is from the application of blood pressure.

Claims 67-73 (cancelled)

Claim 74. (previously amended) An article according to claim 43 wherein the tube is adapted for use as an intraluminal graft.

Claim 75. (previously amended) An article according to tube 74 wherein the intraluminal graft has a wall thickness less than about 0.25 mm.

Claim 76. (previously amended) An article according to claim 74 wherein the circumference of the tube increases in response to the application of the circumferentially distending force up to a second circumference that is at least 100% larger than the circumference prior to the application of the circumferentially distending force, thereafter the second circumference remaining substantially unchanged with further increasing circumferentially distending force within a designed range of operating pressure.

Claim 77. (previously amended) An article according to tube 76 wherein the vascular graft has a wall thickness less than about 0.25 mm.

Claims 78 -81 (cancelled)

Claim 82. (previously amended) An article according to claim 44 wherein the tube is adapted for use as an intraluminal graft.

Claim 83. (previously amended) An article according to tube 82 wherein the intraluminal graft has a wall thickness less than about 0.25 mm.

Claim 84. (previously amended) An article according to claim 82 wherein the circumference of the tube increases in response to the application of the circumferentially distending force up to a second circumference that is at least 100% larger than the circumference prior to the application of

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the circumferentially distending force, thereafter the second circumference remaining substantially unchanged with further increasing circumferentially distending force within a designed range of operating pressures.

Claim 85. (previously amended) An article according to tube 82 wherein the vascular graft has a wall thickness less than about 0.25 mm.

Claim 86. (original) An article comprising a tube having a circumference wherein the circumference of said tube increases in response to the initial application of blood pressure.

Claim 87. (previously amended) An article according to claim 86 wherein said tube is adapted for use as a vascular graft.

Claim 88. (previously amended) An article according to claim 86 wherein said tube is adapted for use as an intraluminal graft.

Claims 89 and 90 (cancelled)

Claim 91. (previously amended) An article according to claim 86 wherein the tube exhibits minimal recoil following the removal of blood pressure.

Claim 92. (previously amended) An article according to claim 91 wherein the minimal recoil is 14 percent or less.

Claim 93. (previously amended) An article according to claim 92 wherein the minimal recoil is 10 percent or less.

Claim 94. (previously amended) An article according to claim 93 wherein the minimal recoil is 7 percent or less.

Claim 95. (previously amended) An article according to claim 91 wherein the tube is adapted for use as a vascular graft.

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Claim 96. (previously amended) An article according to claim 91 wherein the tube is adapted for use as an intraluminal graft.

Claim 97. (previously amended) An article according to claim 91 wherein the tube comprises porous polytetrafluoroethylene.

Claims 98-117 (cancelled)